



## Climate change and food safety: A review

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### Abstract:

Climate change and variability may have an impact on the occurrence of food safety hazards at various stages of the food chain, from primary production through to consumption. There are multiple pathways through which climate related factors may impact food safety including: changes in temperature and precipitation patterns, increased frequency and intensity of extreme weather events, ocean warming and acidification, and changes in contaminants' transport pathways among others. Climate change may also affect socio-economic aspects related to food systems such as agriculture, animal production, global trade, demographics and human behaviour which all influence food safety. This paper reviews the potential impacts of predicted changes in climate on food contamination and food safety at various stages of the food chain and identifies adaptation strategies and research priorities to address food safety implications of climate change. The paper concludes that there is a need for intersectoral and international cooperation to better understand the changing food safety situation and in developing and implementing adaptation strategies to address emerging risks associated with climate change. (c) 2010 Elsevier Ltd. All rights reserved.

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### Resource Description

#### Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

#### Communication Audience:

audience to whom the resource is directed

Policymaker

#### Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

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#### Exposure :

# Climate Change and Human Health Literature Portal



weather or climate related pathway by which climate change affects health

Extreme Weather Event, Food/Water Quality, Food/Water Quality, Sea Level Rise, Temperature

**Extreme Weather Event:** Flooding

**Food/Water Quality:** Biotoxin/Algal Bloom, Biotoxin/Algal Bloom, Biotoxin/Algal Bloom, Pathogen

**Geographic Feature:**

resource focuses on specific type of geography

Desert, Freshwater

**Geographic Location:**

resource focuses on specific location

Global or Unspecified

**Health Impact:**

specification of health effect or disease related to climate change exposure

Infectious Disease, Other Health Impact

**Infectious Disease:** Foodborne/Waterborne Disease, Vectorborne Disease, Zoonotic Disease

**Foodborne/Waterborne Disease:** Campylobacteriosis, Salmonellosis, Vibrios

**Foodborne/Waterborne Disease (other):** Chagas disease

**Vectorborne Disease:** Tick-borne Disease

**Tick-borne Disease:** Tick-borne Encephalitis

**Other Health Impact:** Toxin poisoning

**Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation

**Model/Methodology:**

type of model used or methodology development is a focus of resource

Exposure Change Prediction

**Population of Concern:** A focus of content

**Population of Concern:**

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

**Resource Type:**

format or standard characteristic of resource

Review

**Timescale:** ☒

time period studied

Time Scale Unspecified

**Vulnerability/Impact Assessment:** ☒

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content